Puyallup and Chambers-Clover Creek Watersheds

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Salmon Habitat Protection and Restoration Strategy

Puyallup (WRIA 10) and Chambers-Clover Creek (WRIA 12) Watersheds

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July 19, 2002

Chapter 1 Introduction

Background

The 1999 Washington Legislature created and authorized the Salmon Recovery Funding Board (SRFB) to guide spending of funds targeted for recovery activities and projects. In addition to creating the SRFB, the legislature provided guidance on the ranking process for funding projects. That ranking process includes an opportunity for local organizations to prioritize projects from their watersheds before they are submitted to the SRFB. The process is sometimes referred to as "2496" based on the number of legislature's bill that created it. The bill was codified into Revised Code of Washington, Chapter 77.85.

Pierce County applied to be the "Lead Entity" for the Puyallup and Chambers-Clover watersheds ranking process in 1999 and has continued to serve in that capacity. It should be noted that projects from both watersheds are ranked together and only one list is submitted to the SRFB for consideration.

Project ranking is performed by a "Citizens' Committee" of stakeholders from both watersheds. The members of the Citizens' Committee were appointed by the Puyallup River Watershed Council to reflect stakeholder representation identified by statute and at the request of the Pierce County Executive.

The Citizens' Committee is guided in their ranking by a Technical Advisory Group (TAG). The TAG provides a preliminary project ranking which is based on a scientific assessment of each project's benefit to fish and likelihood of success.

This strategy document describes the criteria that both the Citizens' Committee and TAG consider when evaluating the desirability of salmon recovery projects.

Geographic Area

There are two watersheds included in this strategy, the Puyallup Watershed and the Chambers-Clover Watershed. The Puyallup Watershed is known as Water Resource Inventory Area (WRIA) 10 and the Chambers-Clover Creek Watershed is known as WRIA 12. WRIA boundaries throughout Washington State were formalized under Washington Administrative Code 173-500-040 and authorized

under the Water Resources Act of 1971, RCW 90.54. The Washington State Department Ecology is responsible for administering the boundaries.

The Puyallup Watershed covers almost 950 square miles. It includes highly urbanized areas such as the City of Tacoma as well as wilderness areas in the Snoqualmie National Forest and Mount Rainier National Park. Approximately two-thirds of Mount Rainier National Park fall within the watershed boundaries. Significant waterbodies in this watershed include: Puyallup River, White River, Carbon River, Greenwater River, Lake Tapps, South Prairie Creek, Hylebos Creek, and Clarks Creek. There are 16 cities and towns whose jurisdictions fall within the watershed. The watershed includes sections of both Pierce and King Counties.

The Chambers-Clover Creek Watershed covers approximately 149 square miles. Land uses in the area are primarily urban and suburban with some forested areas on the Fort Lewis military reservation. There are six cities within the watershed. Significant waterbodies in the area include: Clover Creek, Chambers Creek, Flett Creek, Leach Creek, Lake Steilacoom, American Lake, Gravelly Lake, Spanaway Lake, Lake Louise, Snake Lake, Puget Creek, and Sequalitchew Creek.

The use of the term "significant" in reference to the waterbodies implies only that the features are large or well known. There are additional waterbodies within both watersheds which support salmonid populations and not all of the waterbodies listed support large populations of fish. Chapter 2 of this document includes more detailed information about salmon presence in the area.

Purpose

This strategy document was developed to provide guidance on how local prioritization will occur for projects submitted from the Puyallup and Chambers-Clover Creek Watersheds. It also serves a broader goal by describing the community's vision for salmon habitat protection and restoration.

Goals

The Citizens' Committee identified the following goals as necessary elements for salmon habitat protection and restoration:

1) More functional habitat, intact watershed processes, and ecosystem connectivity.

2) Public recognition of stewardship ethic and action

3) Sustainable, measurable wild-based salmon population

4) Cooperative watershed partnerships

5) Expedited recovery results

6) Integrated and compatible land use

7) Sustainable economy

8) Successful monitoring programs and adaptive management

Document Organization

The strategy document is organized into three chapters. The first chapter serves as an introduction and provides background information. The second chapter describes the strategy developed by the TAG to assess benefits to salmon (Goals 1 and 3). The third chapter explains the Citizens' Committee's strategy for addressing the cultural and socio-economic elements of salmon recovery which are reflected in the remaining six goals.

Chapter 2

Science Strategy

This chapter outlines the strategies used by the technical advisory group to:

- Identify and rank habitat restoration and protection needs, and
- Evaluate and rank salmon habitat project proposals.

This work is done by members of the Fish and Wildlife Committee of the Puyallup River Watershed Council for the Puyallup River Watershed (WRIA 10) and the Chambers/Clover Creek Watershed (WRIA 12) salmon recovery lead entity organization.

The strategy seeks to meet the fish and habitat recovery goals of the lead entity organization. The strategy uses best available science and specific fisheries and habitat information from these watersheds to prioritize habitat restoration and protection needs and set forth the means the technical team will use to evaluate and rank project proposals based on benefit to fish and the likelihood of success. Project applicants may use this strategy document as a source of guidance and instructions for preparing SRFB funding applications which will score well in the local ranking process.

We have used the long-term experience of professional fisheries biologists working in watersheds, and the published data and reports on the watershed in the development of this science strategy. We have also used a conceptual (scientific) model to help understand how we think salmon function in the watersheds. The model (Ecosystem Diagnosis and Treatment – EDT) is based on existing data and professional judgment where data is lacking.

EDT is an example of a habitat-based model used to estimate changes in fish populations (also limiting factors analysis, life-cycle models). This sort of conceptual model does not directly identify causes of habitat degradation or specific restoration actions. However, it does have an important use in recovery planning. First, they provide habitat-based estimates of potential population size for comparison to estimates from population viability analyses. Second, they indicate which habitat changes are most likely responsible for declines in salmon populations, and therefore which categories of restoration actions are most likely to result in increased salmon populations. Modified from draft - Beechie, et al. 2002.

However, we recognize that models are no substitute for basic biological data. While we know much about the salmon stocks and the watersheds, the technical team recognizes that there are also considerable uncertainties in our understanding of salmon in general and their specific habitat utilization in this watershed.

We think that the following describes some of those key uncertainties and data gaps. The conceptual model reports also describe significant data needs relative to key habitat parameters.

Survival of juvenile salmon as a function of their migration history is only beginning to be understood. The relatively recent development of Passive Integrated Transponder (PIT) tag technology allows the collection of data to help this understanding. Specific data collection efforts aimed at improving our understanding of juvenile survival and life-history diversity need to be implemented in the watershed, using this and other technology such as smolt trapping.

Further information on genetic differentiation and population structure of our salmonid stocks is necessary. This is a key issue with regard to the potential impacts of inadvertent supplementation by hatchery fish on the performance of wild chinook in South Prairie Creek.

We need considerably more knowledge about the result of habitat restoration activities in the watershed. Regional research into this issue has pointed out that we do not now what these habitat actions are likely to yield in terms of enhanced salmon numbers or production. The scientific challenges include: "identifying the correct scale of analysis, quantifying the effectiveness of restoration efforts, factoring in sub-lethal effects of water quality (and pollutants such as pesticides), and recognizing that "habitat" implies a fixed trait, while we are really trying to restore processes (Beechie and Bolton 1999).

Goals

The overall habitat goal is to provide the habitat necessary to support healthy, harvestable populations of salmon in the Puyallup River Watershed, Chambers Creek/Clover Creek Watersheds, and independent watersheds; including ESA-listed independent populations of chinook salmon, and other unique stocks of naturally spawning salmon. The habitat strategy of this document is directed towards salmon stocks primarily sustained by natural spawning.

Geographic Areas

This strategy applies to the Puyallup River Watershed (WRIA 10) and to the Chambers-Clover Creek Watershed (WRIA 12). While these two watersheds are distinctly different, the lead entity organization has committed to provide one prioritized list of projects from both watersheds to the SRFB.

Briefly, the Puyallup River Watershed includes three major rivers; the White, Carbon, and Puyallup Rivers and their watersheds. All three are glacial rivers with headwaters on Mt. Rainier. WRIA 10 also includes the Hylebos Creek Watershed and a few other independent Puget Sound tributaries.

WRIA 12 includes Chambers Creek and its tributaries. Leach Creek, Flett Creek and Clover Creek are the major tributaries. Independent tributaries in WRIA 12 include Sequalitchew Creek and Murray Creek.

Detailed reports on conditions in these watersheds are available. An initial analysis using EDT has been prepared for both WRIA 10 and 12. A Limiting Factors Report was prepared for WRIA 10, but not for WRIA 12. Characterization reports have been written for the Lower Puyallup, Upper Puyallup, and Chambers-Clover Creek Watersheds as part of the Nonpoint Planning Process (WAC 400-12).

Species

This document will use the word 'salmon or salmonid' to mean all those anadromous salmonid fishes occurring in, and native to, Pacific Ocean drainages of the United States – including anadromous forms of cutthroat and steelhead trout, and char. This includes cutthroat trout (*Oncorhynchus clarki*), steelhead *trout (O. mykiss*), coho salmon (*O. kisutch*), chinook salmon (*O. tshawytscha*), sockeye salmon (*O. nerka*), chum salmon (*O. keta*), pink salmon (*O. gorbuscha*), bull trout (*Salvelinus confluentus)* and Dolly Varden (*Salvelinus malmo).*

All of the identified unique stocks of naturally spawning salmon for both WRIA 10 and 12 are listed in Table 1.

Objectives

Specific objectives for fish recovery, habitat restoration and protection, and geographic area priorities follow.

Fish Recovery Objectives

1) **Support recovery of independent populations of ESA listed stocks.**

   Priority will be given to the protection and restoration of habitat that supports recovery of independent populations of ESA listed stocks. The Puyallup River watershed includes two independent populations of chinook salmon listed under the federal Endangered Species Act (ESA). These are the White River spring chinook and Puyallup River fall chinook. Unique stocks of bull trout listed under the ESA are found in each of the three major rivers, e.g. the Puyallup, White, and Carbon Rivers.

2) **Support the sustainability of native wild stocks.**

   The maintenance of genetic and life-cycle diversity across the region is critical to the recovery of listed fish species, and to the sustainability of native stocks of wild fish. To help preserve this diversity, priority will be given to habitat projects benefiting naturally spawning, locally adapted fish stocks with minimal hatchery influence. The stock origin and production type classifications (shown in Table 1) used for identifying and prioritizing stocks to achieve this objective are those provided in the Washington Department of Fish and Wildlife (WDFW) Salmon and Steelhead Stock Inventory (SASSI)

1993, and the Salmonid Stock Inventory (SaSI) for bull trout (WDFW, 1998). and Coastal Cutthroat (WDFW 2000). Additional information on stock status and trends is included in Appendix B.

SaSI (used generally to refer to all three documents now) notes that its stock origin designations should be considered as preliminary until such time as more detailed information confirms or refutes the current origin designations. In developing project proposals, sponsors are encouraged to bring forward any additional information available regarding stock identification, origin, production and status.

Based on the SaSI information, first priority under this objective will be given to stocks designated as being of **native** origin and **wild** or **composite** production. In the Puyallup watershed, for other than ESA listed fish, these stocks would include the Puyallup/Carbon fall chum, the Puyallup pink, and the three steelhead stocks.

Second priority will be given to stocks of **mixed** origin and **wild** or **composite** production. These would include the two coho stocks.

Third priority will be given to stocks of unknown origin. These stocks would include the Fennel Creek and Hylebos Creek chum stocks. Project applicants are encouraged to provide updated stock origin information in their applications and also to the Washington State Department of Fish and Wildlife.

It should be noted that all chinook and bull trout stocks are ESA-listed as threatened and that the White River Fall Chinook was not listed as a separate stock in prior stock inventory.

3) **Support recovery of critical stocks.**

SaSI classifies a stock as "critical" if it is "experiencing production levels that are so low that permanent damage to the stock is likely or has already occurred." SaSI further states that these stocks are "in need of immediate restoration efforts to ensure their continued existence and to return them to a productive state."

The loss of a critical stock can reduce genetic and life-cycle diversity within the region. For this reason habitat restoration and protection actions needed to support the recovery of critical stocks will be given priority. The SaSI reports identified the White River spring chinook as critical. Accordingly, habitat projects benefiting this stock will be a high priority.

Table 1. Unique, Naturally Spawning Salmon Stocks in WRIA 10 (Puyallup). Compiled from WDFW, 1993 SASSI:, WDFW, 1998 SaSI

Stock	Major Subbasins	Origin	Production type	Status
White Spring Chinook (includes summer fish)	White, Clearwater, W. Fork White, Greenwater	Native[1]	Composite[2]	Critical
Puyallup Summer/Fall Chinook	Puyallup, Carbon, South Prairie	Unknown[3]	Composite	Unknown
Puyallup/Carbon Fall Chum	Carbon, South Prairie	Native	Wild[4]	Unknown
Fennel Creek Fall Chum	Fennel Creek	Unknown	Wild	Healthy
Hylebos Creek Fall chum	Hylebos Creek	Unknown	Unknown	Unknown
Puyallup Coho	See Appendix A	Mixed[5]	Composite	Depressed
White Coho	White, Clearwater, Greenwater, W. F. White	Mixed	Composite	Healthy
Puyallup Pink	Puyallup, South Prairie	Native	Wild	Healthy
Puyallup R. Winter Steelhead	Puyallup, Carbon, South Prairie, Voight	Native	Wild	Healthy
White R. Winter Steelhead	White, Clearwater, Greenwater Rivers	Native	Wild	Healthy
Carbon Winter Steelhead	Carbon R. and tributaries	Native	Wild	Healthy
Puyallup R. Bull Trout	Puyallup R. and tributaries	Native	Wild	Unknown
White R. Bull Trout	White R. and tributaries	Native	Wild	Unknown
Carbon R. Bull Trout	Carbon R. and tributaries	Native	Wild	Unknown
Chambers Winter Chum	Chambers, Flett, Leach Creeks	Native	Wild	Healthy
Chambers Creek Coho	Chambers Creek	Mixed	Composite	Unknown
Puyallup Coastal Cutthroat	Puyallup, Carbon, White, major tribs.	Native	Wild	Unknown
Chambers Summer Chum	Chambers Creek (last fish seen in 1983)	Native	Wild	Extinct

[1] SASSI defines **native** as "an indigenous stock of fish that has not been substantially impacted by genetic interactions with non-native stocks, or by other factors, and is still present in all or part of its original range."
[2] A **composite** stock is a stock "sustained by both wild and artificial production."
[3] Stocks of **unknown** origin are those "where there is insufficient information to identify stock origin with confidence."
[4] SASSI defines a **wild** production stock as one that "is sustained by natural spawning and rearing in natural habitat, regardless of parentage."
[5] **Mixed** stocks are defined as those whose individuals originated from commingled native and non-native parents, and/or by mating between native and non-native fish; or a previously native stock that has undergone substantial genetic alteration."

Habitat Protection and Restoration Objectives

Recovery of salmonid species requires the protection and restoration of the habitat conditions and processes upon which the fish depend. We know that removal of migration blockages is consistent with conservation of ecosystems that support salmon, as is the protection of existing high quality habitat and the protection of riparian forests and their functions. Therefore restoring access to existing habitat, protection of existing high-quality habitat, and restoration of natural habitat-forming processes will be near-term objectives. (based on Roni, et al. 2001)

1) **Restore access to habitat**

Removal of man-made barriers to substantial reaches of good quality habitat provides important benefits to fish in both the near and long term. Actions to improve access can include removal or replacement of blocking culverts and reconnecting isolated habitats, such as side channel areas. Removing existing levees in mainstem areas will allow access to historical oxbows and river meander channels. Protecting or restoring properly functioning habitat conditions are only beneficial if fish have the necessary access to the habitat. In assessing the need to remove a barrier consideration must be given to the stocks and life-history stages affected and the type, quality and quantity of habitat that would be made accessible. The Pierce Conservation District completed a Fish Passage Inventory Project for the Puyallup Basin in 2000. They are in the process of completing an assessment of habitat quantity and quality above identified barrier culverts, which will help to identify and prioritize barrier removal and replacement projects. A catalogue of oxbow projects in the Puyallup mainstem was produced by the Puyallup Tribe and others (1999). These documents are resources for project applicants and the WRIA 10/12 project ranking committees.

2) **Protect existing high quality habitat conditions.**

The protection of existing high quality habitat is critical to sustaining current fish abundance and productivity. Protection is preferred over habitat restoration projects, which can be expensive and technically difficult (if not impossible in certain circumstances). Habitat assessment information and stock priorities will be used to identify and rank habitats for protection.

Traditional restoration actions such as bank protection or spawning gravel placement attempt to build habitats that do not move in space or time, whereas natural habitats are often created by movement of river channels, wood debris, and sediment. Therefore, many restoration actions fail to restore habitats because they do not recognize the integrated nature of physical and ecological processes in watersheds (Frissell and Nawa 1992, Beechie et al. 1996). Avoiding these types of project failure requires that we

focus on restoring ecosystem processes and functions that form and sustain salmonid habitats, rather than on the habitats themselves.

The quality and quantity of habitat, the potentially affected stocks, and the nature and urgency of the threat to habitat values are key considerations in determining habitat protection needs. Priority will be given to protection of high quality habitat facing serious near-term threats.

3) **Restore degraded watershed processes.**

Restoration of natural watershed processes is preferred to structural restoration, in order to sustain habitat conditions upon which salmon stocks depend over the long-term. Projects that address a habitat need on a temporary or near-term basis may be justified as a critical interim step in a comprehensive effort to restore natural habitat forming processes over the long-term. Habitat assessment information will be used to help identify and prioritize key watershed functions and locations requiring restoration or protection.

4) **Support of critical salmonid life-history stages.**

Proposed projects may target habitat conditions needed to support critical life-history stage needs. In that case, the proponent should identify key habitat needs for target species in the project area. Projects should be based on adequate supporting information linking:

- The habitat requirements of target species and life-history stages.
- The availability of those habitat conditions relative to historic conditions.
- The likelihood that the lack of suitable habitat is restricting population abundance.

Project proposals should clearly identify each species and life-history stages that will benefit from the proposed action.

5) **Secure near and long-term benefits**

Addressing habitat protection and restoration needs that will provide both near-term and long-term benefits for fish should receive a higher priority than addressing conditions that will provide benefits only in the long-term.

Projects that provide only short-term benefits may be justified if they are:

- Part of a comprehensive effort to restore natural habitat processes over the long-term, and are
- Designed to sustain or protect a stock(s) until natural habitat processes re restored.

Geographic Objectives

Recovery of salmonids requires that those stream reaches most important to the productivity of stocks be protected or restored to provide the functions contributing to that productivity. Geographic priorities for protection and/or restoration are based on an assessment of the relative contributions of geographic areas, and the environmental factors operative within each, to the biological performance[6] of naturally produced salmon.

The geographic priorities in Tables 2-5 are based on an assessment of the watersheds using the Ecosystem Diagnosis and Treatment (EDT) methodology[7]. The geographic priorities for the Hylebos, Chambers-Clover, and the Puyallup/White are relative priorities within each of these watersheds. The EDT reports should be referred to for further information. Additional assessment of the watershed using EDT is occurring as of this writing. It is expected that geographic priorities will be updated as further information is available.

Projects located in, or benefiting, areas with a higher geographic priority ("A" or "B") will be given an advantage in the ranking process over areas with lower geographic priorities. However, the geographic priority rating will have the same value in the ranking process across basins. Therefore, an "A" in the Hylebos is equal to an "A" in the Puyallup/White from a numerical ranking standpoint.

Evaluation and Ranking of Habitat Projects

The ranking of project proposals will be done based on the fish recovery objectives, habitat protection and restoration objectives, and geographic priorities described in sections 2-4. A matrix for scoring projects based on these objectives has been developed to help with the ranking. It will also take into consideration the degree to which a project addresses an identified priority and the level of certainty that a project will produce its intended benefits for fish.

The number of affected stocks and their importance along with the degree to which correction of a limiting factor or protection of habitat would help achieve or sustain good habitat conditions are also key considerations in determining project priorities.

[6] Biological performance is defined in terms of three elements: productivity, capacity, and life history diversity, as defined by Mobrand (The EDT Method, August 1999 Draft).

[7] *Watershed Analysis for the Development of Salmonid Conservation and Recovery Plans Within Pierce County*, Mobrand Biometrics, 2001.

Evaluation Criteria

Benefits to Fish

a) The number of stocks affected and their priorities.
b) The nature and significance of the benefit(s) the project will have for the affected stocks.
c) Proposed correction of a limiting factor or protection of habitat which would achieve or sustain functioning habitat conditions. (The Limiting Factors Analysis (LFA) and other technical assessments would be used as resources for ranking this element.)

Certainty of Success

The level of certainty that the project would produce its intended benefit for fish will be assessed based on the extent to which the proposed project:

a) Demonstrates coordination with (or proximity to) other habitat protection and restoration programs and projects within a basin.

Habitat projects should be designed, coordinated, and sequenced in concert with other salmon recovery activities within a watershed or basin. This can help to achieve the greatest benefit to fish in the shortest possible time and with the most efficient use of resources.

Specific consideration will be given to whether a project is:

- An element of a comprehensive watershed or basin restoration and protection strategy;
- Well coordinated and logically sequenced with other habitat projects completed, underway, and planned for a watershed or basin; and/or
- Complements and supports other local and state salmon recovery regulations and programs such as land use and development regulations, critical area ordinances, storm water management programs, shoreline master plans, forest management regulations, etc.

b) Has a sound technical basis in addressing habitat forming processes and limiting factors.

The success of a project requires a solid understanding of conditions and watershed processes that cause or contribute to the problem or limiting factor being addressed.

For some projects, existing LFA information may be sufficient. More complex problems may require a more thorough assessment of conditions and watershed processes. This information may be available in existing studies and evaluations, or more site-specific assessments and preliminary design work may be necessary. The *Guidance on Watershed Assessment for*

Salmon, Part 3 (Joint Natural Resources Cabinet, State of Washington, May 2001) describes important considerations for various project types.

c) Applies proven methods and technologies.

Using proven and accepted methods and technologies enhances the certainty of project success. Projects should use approaches and technologies that are commensurate with the nature, scope, and complexity of the problem being addressed.

Innovative or experimental approaches may be acceptable if no proven method exists or it can be shown that such approaches will reasonably extend knowledge of restoration methods.

d) Demonstrates that costs are reasonable for the work proposed and the benefit(s) to be realized.

Projects should be designed and implemented in the most efficient and effective manner possible. Project costs should be commensurate to costs for projects of similar nature, scope, and complexity. A project's chance of success can also be enhanced through the use of partnerships that leverage expertise, contributions of materials and labor, and/or funding.

e) Demonstrates an effective maintenance and monitoring element.

Monitoring the effectiveness of the project is critical to determining the success of the project in meeting its objectives. Maintenance of a completed project may be critical to performance and long-term effectiveness.

Sample Science Strategy Ranking Sheet

Project				
Stock priorities (25 points max)				
ESA listed (yes is 10 pts)				
Choose one (origin & prod. type) Native/wild or composite (10) Mixed/wild or composite (8) Unknown (6)				
Critical stock (yes is 5 pts)				
Habitat priorities (26 points max)				
Restore access (10 pts max.)				
Protection project (8 pts max)				
Restore processes (6 pts max)				
Restore other (4 pts max)				
Critical life stages (5 pts max)				
Long-term benefit (5 pts max)				
Geographic priorities (10 pts max)				
Choose protection or restoration				
Category A (10 pts)				
Category B (8 pts)				
Category C (6 pts)				
Category D (4 pts)				
Total				

Chapter 3

Citizens' Strategy

Project benefit to salmon populations is the guiding consideration in ranking projects for the purpose of recommendation for salmon recovery funds. However, salmon recovery cannot be divorced from the context of the surrounding community. Strong public support for salmon recovery is essential to the success of individual recovery projects, regional recovery and long-term taxpayer support to provide ongoing funding for salmon recovery projects. Conversely, a strategy that focuses solely on salmon benefits while failing to build public support or worse yet alienating the public and potential local sponsors, may unwittingly contribute to the failure of salmon recovery.

The Citizens' Committee was formed to add the community context to the local ranking process for projects submitted to the WRIA 10/12 lead entity for Salmon Recovery Fund Board consideration. The process is designed to meet the statutory obligations outlined in RCW 77.85. The committee is composed of representatives from businesses, government, agriculture, and conservationists in the watershed. The Citizens' Committee has developed criteria for ranking proposed projects based on non-technical, socioeconomic factors of importance to the communities within WRIAs 10/12.

Ranking Process

The Technical Advisory Group (TAG) for WRIAs10/12 ranks projects for benefit to salmon as well as technical merit. That ranked project list is then forwarded to the Citizens' Committee for consideration of socio-economic factors. The Citizens' Committee is, by statute, responsible for making the final ranking recommendation for the WRIA and does so using the scientific recommendations of the TAG as its guide. Those projects with outstanding socioeconomic components may be elevated in the ranking relative to the TAG ranking. The Citizens' Committee developed socioeconomic criteria for ranking projects that reflect the values and needs for salmon recovery in the WRIA 10/12 community.

The accompanying ranking sheet was designed to facilitate Citizens' Committee project ranking and make the process more transparent. Projects with a score of 80 points or more may have their ranking increased by the Citizens' Committee. Those not scoring 80 points or more retain their TAG ranking .

The Citizens' Committee forwards the ranked list to the Puyallup River Watershed Council (PRWC) for review and approval. The PRWC presentation also serves as an important opportunity for public education and input on the proposed projects and the ranking process. The ranked list and justification materials are then submitted to the SRFB for consideration.

Objectives

The Citizens' Committee has developed the followings objectives and criteria to account for the many important socio-economic factors that may be involved in salmon recovery projects, in addition to salmon benefit. Many of these directly address recovery projects within urbanized watersheds.

- Increase public support and awareness of salmon recovery and watershed stewardship
- Develop and/or nurture partnerships that will contribute to future salmon benefits
- Encourage new projects and/or new project sponsors
- Encourage projects that are compatible with surrounding land use designations
- Encourage projects with a high likelihood of success

Criteria

6) Increase Public Recognition and Stewardship

Salmon recovery projects that include substantive volunteer and/or public education components are essential to building public support for salmon recovery and cultivating a stewardship ethic in the surrounding community. Priority will be given to projects that:

- Include public education components relative to watershed health and salmon recovery
- Increase the amount of preserved recognizable and/or accessible open space and habitat,
- Foster a stewardship ethic by incorporating volunteer labor into the project and/or enhancing the local volunteer base through training or other programs
- Involve private landowner participation, either in incorporating habitat features and native plants into their landscape or by participation in habitat conservation programs

7) Encourage Cooperative Watershed Partnerships

To be successful, salmon recovery projects often require several different organizations working together in both implementation and funding. Because watersheds, and even sub-watersheds, typically cross jurisdiction and community boundaries, cooperative partnerships are also essential to comprehensive recovery planning and implementation. Involvement of private landowners and businesses strengthens a strategic element of community support. Priority will be given to projects that:

- Involve partnerships between multiple jurisdictions, and public and private entities
- Establish new partnerships among entities
- Establish mechanisms for coordination between entities

8) Expedite Recovery Results

Individual salmon recovery projects can expedite local salmon population recovery by building factors that support other projects. Priority will be given to projects that:

- Enhance the likelihood of implementing future salmon recovery projects
- Contain a greater than minimum local match, demonstrating strength of project commitment and making more funds available for other salmon recovery projects
- Are likely to be successful (readiness to proceed, secured matching funds, proponent capability, community support)
- Encourage or train new project sponsors
- Are supported by other adopted policies or plans

9) Support Integrated and Compatible Land Use

Recovery projects do not exist in isolation from present and future surrounding land use. Projects that are likely to be negatively affected by present or future land uses and/or future growth patterns are less likely to succeed over the long term. Projects that encourage use of long-term habitat conservation mechanisms enhance the potential for success. Therefore, priority will be given to projects that:

- Are not threatened by current and future land uses at or surrounding the project
- Include, or encourage the use of, long-term habitat conservation mechanisms, such as the Public Benefits Rating System or conservation easements

10) Sustainable Economy

Salmon recovery is inextricably linked to a sustainable economy. It is only when people are comfortable with their economic situation that they will be willing to give the salmon the resources (water, habitat, etc.) that they need to survive. Therefore, projects that take economic sustainability into account are more likely to help salmon recovery as a whole. Priority will be given to projects that:

- Encourage businesses or industries to participate in restoring or preserving salmon habitat or support community economic development
- Do not impair a community's economic, social, or cultural development

11) Encourage Monitoring Programs and Adaptive Management

The public expects government-funded projects to be able to demonstrate tangible results. As the amount of public funds committed to salmon recovery accumulates, the public and its elected officials will expect project proponents to demonstrate the value of the public investment in salmon restoration. Therefore, projects that exceed the minimum criteria for monitoring will be recognized. Priority will be given to projects that:

- Include project monitoring for at least 5 years after completion (if appropriate to project type)
- Assign a capable entity to maintain the project
- Include its monitoring program as part of a larger monitoring effort

Funding Projects In Lower Priority Areas

In WRIA 10/12 projects come from a mix of communities, with diverse environmental conditions. Several of the strongest and most active proponents for salmon restoration projects reside in urbanized areas where the salmon habitat is generally more degraded than other areas within the watershed. However, funded restoration projects in these areas can help as demonstrations that build support for increased numbers of projects in priority areas, where local support is often less strong.

Urbanized sub-watersheds typically do not reflect geographic priority areas for salmon, nor do they typically have the potential to produce large populations of salmon. However, they are home to the overwhelming proportion of residents in the WRIA and therefore represent important opportunities to connect large numbers of people to salmon recovery efforts.

In addition to the intrinsic benefit to local salmon populations, salmon restoration projects within urbanized watersheds have several important benefits. Projects in urban areas make wild salmon and restoration projects accessible to a large population, creating opportunities to educate large numbers of people about the value of salmon and lifestyle changes needed to conserve wild populations. This is particularly important since the forecasted population growth in the Puget Sound Region may overwhelm positive improvements of salmon recovery projects, if not accompanied by significant and broad lifestyle changes. Such lifestyle changes, however, are likely impossible without involving and cultivating a base of support with the urban population.

Cultivation of public education and stewardship is also important to building broad public support for the lead entity strategy and regional salmon recovery. In addition, projects with strong volunteer components provide valuable leverage of limited salmon recovery funding.

Urban restoration projects can also encourage projects in priority areas that don't have active community support. Proving that salmon restoration projects can be implemented in urban areas without damaging the local economy can help counter the distrust of such projects often encountered in rural areas accustomed to resource conflicts. Because of the strong community support in many urban areas, salmon recovery projects in these areas provide a model for successful restoration projects that can be applied to rural areas with less experience in and less trust of these types of projects.

For these reasons, the Citizens' Committee recognizes that funding well-designed salmon restoration projects in urban streams is an important component of regional salmon recovery and supports the implementation of the overall WRIA 10/12 strategy.